

WHAT IS CLAIMED IS:

1. A transmission apparatus for a working vehicle, comprising:
a hydrostatic transmission including
a hydraulic pump driven by a prime mover equipped on said working vehicle,
a hydraulic motor fluidly connected to said hydraulic pump, and
a hollow motor shaft serving as an output shaft of said hydraulic motor;
and
sun-and-planetary gearing including first, second and third elements arranged coaxial to said motor shaft,
wherein said first element is drivingly connected to said motor shaft so as to be rotated integrally with said motor shaft,
wherein said second element is drivingly connected to front wheels of said working vehicle, and
wherein said third element is drivingly connected to rear wheels of said working vehicle and differentially connected to said second element through said first element.
2. The transmission apparatus for a working vehicle as set forth in claim 1, further comprising:
a differential locking mechanism for locking said second and third elements with each other.
3. The transmission apparatus for a working vehicle as set forth in claim 2, wherein at least one of said second and third elements includes a shaft drivingly connected to either said front or rear wheels, and wherein said differential locking mechanism is disposed on said shaft.

4. The transmission apparatus for a working vehicle as set forth in claim 1, wherein said sun-and-planetary gearing is disposed in front of said hydrostatic transmission.

5. The transmission apparatus for a working vehicle as set forth in claim 1, wherein said sun-and-planetary gearing is disposed behind said hydrostatic transmission.

6. The transmission apparatus for a working vehicle as set forth in claim 1, further comprising:

a housing, wherein said hydrostatic transmission is disposed in said housing, and wherein said sun-and-planetary gearing is disposed outside said housing.

7. The transmission apparatus for a working vehicle as set forth in claim 6, further comprising:

a second housing, wherein said sun-and-planetary gearing is disposed in said second housing, and wherein said second housing is attached to said housing.

8. The transmission apparatus for a working vehicle as set forth in claim 1, wherein said working vehicle is a riding lawn mower.